CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2008 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/JCR/Consultants/04/2018-19

Dated: 06.04.2018

To,
Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Sir,

Sub: **Consultancy Services for the work of Improvements to drain at Vijayalakshmi layout at Bagalagunte in Ward No.14, BBMP, Bangalore.**

Ref: 1) EE/DD/WO/207/2017-18/ Date: 23.01.2018
2) Job Code: 014-18-000017

We are herewith forwarding to **Mr. J.C Ramachandra,** 1st and Final Bill duly verified and certified that the work is satisfactory and for a Gross Value of Rs. 50,10,428/- (Rupees Fifty Lakhs Ten Thousand and Four Hundred and Twenty Eight only) for further needful.

Thanking you,

Yours faithfully,
For Civil-Tech Consultants and Engineers

6.4.2018
Chief Executive Officer

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/SAND-Gradation/2017-18

30.01.2018

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
* Sample ID	:	Fine Aggregates
Technical Reference	:	IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	:	29.01.2018
Date of Testing	:	30.01.2018

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	97.00	90-100	90-100	90-100	95-100
2.36	79.50	60-95	75-100	85-100	95-100
1.18	59.50	30-70	55-90	75-100	90-100
600 Micron	41.00	15-34	35-59	60-79	80-100
300 Micron	23.00	5-20	8-30	12-40	15-50
150 Micron	7.10	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Civil-Tech Consultants & Engineers Bangalore

Remarks : This sample is under Zone-II specific limits.

Note:

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⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

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ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

VIDYARANI P.K.
Technical Manager

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T-2377

Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/AGG/GR/2017-18

30.01.2018

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
* Sample ID	:	Coarse Aggregates (40mm)
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	29.01.2018
Date of Testing	:	30.01.2018

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.34	95-100	85-100
20	38.94	30-70	0-20
10	17.94	10-35	0-5
4.75	4.24	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/AGG/GR/2017-18

30.01.2018

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of Work	: Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
* Sample ID	: Coarse Aggregates (40mm)
Technical Reference	: IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	: 29.01.2018
Date of Testing	: 30.01.2018

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.34	95-100	85-100
20	38.94	30-70	0-20
10	17.94	10-35	0-5
4.75	4.24	0-5	-

* Information is furnished by the Customer/Representative

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Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/CC Solid Block/2017-18

02.02.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF SOLID CONCRETE BLOCKS

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
Technical Reference	:	IS: 2185 (Part-1) - 2005 (RA-2010)
Size of Blocks	:	400mm x 200mm x 200mm
Cross Sectional Area	:	80000 mm^2
No. of Blocks Tested	:	08
Sample Received on	:	30.01.2018
Date of Testing	:	02.02.2018

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS: 2185 (Part-1) - 2005 (RA-2010)
1	Block 1	35.23	285.7	3.57	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	36.69	286.6	3.58	
3	Block 3	34.85	285.3	3.57	
4	Block 4	36.62	288.2	3.60	
5	Block 5	35.28	285.4	3.57	
6	Block 6	36.89	286.6	3.58	
7	Block 7	35.24	285.4	3.57	
8	Block 8	36.66	287.7	3.60	

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Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/Cube/2017-18 14.03.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of the work	: Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
* Sample ID	: Cement Concrete
Technical Reference	: IS: 516-1959 (RA-2013)
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
* Grade of Concrete	: M_{10}
Compressive Strength as on	: 28^{th} day
Sample Received on	: 14.03.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.02.2018	14.03.2018	8.115	256.6	11.40
2	14.02.2018	14.03.2018	8.205	273.4	12.15
3	14.02.2018	14.03.2018	8.315	283.8	12.61

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Job No.: CTCE/BBMP/JCRC/W.No.14/CSR-01/556/Cube/2017-18 14.03.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. J.C. Ramachandra,** #59, 5th D Main Road, 10th C Cross, West of chord Road, Mahalakshmipuram, Bangalore – 560 086.
* Name of the work	:	Improvements to drain at Vijayalakshmi Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/207/2017-18 Dated: 29.01.2018
* Sample ID	:	Cement Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{10}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	14.03.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.02.2018	14.03.2018	8.109	285.6	12.69
2	14.02.2018	14.03.2018	8.219	290.4	12.91
3	14.02.2018	14.03.2018	8.330	265.4	11.80

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